

Amendments to the Claims:

Please amend the claims to read as follows:

- 1 1. – 10. (Canceled)
- 1 11. (Previously presented) The network element of claim 19, wherein the  
2 service management channel includes a byte of a path overhead of an  
3 optical transmission frame.
- 1 12. (Previously presented) The network element of claim 19, wherein the  
2 service management channel includes a header in a Generic Framing  
3 Procedure client management frame.
- 1 13. (Previously presented) The network element of claim 19, wherein the  
2 message is one of a command message, a response to a command  
3 message, a service performance report message, and a priority code  
4 message.
- 1 14. (canceled)
- 1 15. (canceled)
- 1 16. (previously presented) The network element of claim 19, wherein the  
2 service is one of an asynchronous service, a synchronous service, a local  
3 area network service, a storage area network service, and a managed  
4 wavelength service.
- 1 17. (canceled)
- 1 18. (canceled)

1 19. (Previously presented) A network element connected at one end of a  
2 dedicated circuit used to carry customer traffic associated with a service,  
3 the network element comprising:

4 a client interface receiving client signals from a client network;

5 a service management channel entity deriving from the client  
6 signals service-specific information related to a performance of the  
7 service and generating a message in response to the service performance  
8 information, the message identifying the service to which the service  
9 performance information in the message pertains; and

10 a transport interface for mapping and adapting the client signals to  
11 an optical transport facility, the transport interface transmitting the  
12 message to a network element at the other end of the dedicated circuit  
13 over a service management channel capable of carrying the message  
14 across a network-to-network interface.

1 20. (canceled)

1 21. (Previously presented) The network element of claim 11, wherein the  
2 optical transmission frame is a Synchronous Optical Network (SONET)  
3 frame and the byte of the path overhead is a Z3 byte.

1 22. (Previously presented) The network element of claim 11, wherein the  
2 path overhead byte has bits for conveying a status of the service and bits  
3 for conveying the message.

1 23. (Previously presented) The network element of claim 22, wherein the  
2 path overhead byte further comprises bits for conveying commands and  
3 responses.

1 24. (Previously presented) The network element of claim 12, wherein the  
2 header includes a payload type indicator (PTI) field and a user payload

3 indicator (UPI) field, and wherein the header indicates that the Generic  
4 Framing Procedure client management frame contains the message when  
5 the PTI and UPI fields contain certain predefined values.

1 25. (Canceled)